

07/10/2003 06:37 FAX 216 696 8731
JUL-08-2003 TUE 05:45 PM AMD

AMIN. & TUROCY LLP.
FAX NO. 4087493718

#16
004 Declaration
P. 02
7-16-03
arj

09/891,885

F0279

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application

Applicant(s): Ramsbey, <i>et al.</i>	:	Art Unit:	2811
Serial No.: 09/891,885	:	Examiner:	Thomas J. Magee
Filed: June 26, 2001	:		
Title: ESD IMPLANT FOLLOWING SPACER DEPOSITION	:		

DECLARATION UNDER 37 C.F.R. §1.131

Mail Stop Non-Fee Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir,

I, Mark T. Ramsbey, declare and say as follows:

(1) I am the inventor of the claims of the above-identified patent application. This Declaration is submitted to establish conception of the invention described and claimed in the above-captioned application in the United States at a date prior to May

09/891,885

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29, 2001, which is the date of patent of Fliesler et al. (U.S. Patent 6,238,975 B1) and to establish diligence from at least just prior to May 29, 2001 until constructive reduction to practice, June 26, 2001.

(2) To establish conception of the invention claimed in the above-identified application prior to May 29, 2001, copies of the relevant portions of an Invention Disclosure describing the invention are enclosed with this Declaration as Exhibit A. Conception and the written description of the invention contained in the Exhibit A were completed prior to May 29, 2001 in this country. Certain information, such as the actual dates and proprietary information, contained on the documents has been removed from the copies.

(3) Exhibit A, an Invention Disclosure, describes with words and drawings the invention captured by the claims. In particular, the Invention Disclosure indicates facilitating ESD implant following spacer deposition to avoid short channel effect and reduce costs by alleviating extra masking steps. The drawings show the resultant system structure.

(4) In view of Exhibit A, it can be seen that the invention claimed in the present application was indeed conceived prior to May 29, 2001.

(5) Before April 12, 2001 and after the date of the Invention Disclosure (before May 29, 2001), discussions concerning the Invention Disclosure with the drafting attorney took place, as needed, for the purpose of ensuring the drafting attorney fully understood the contents of the Invention Disclosure.

(6) On or about April 12, 2001, I received a draft version of a patent application for the instant invention from the drafting attorney.

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(7) On or about May 11, 2001, a finalized version of the patent application with formal papers was received.

(8) Executed formal papers and the finalized patent application were returned to the drafting attorney on June 22, 2001.

I, Mark T. Ramsbey, hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued therein.

Mark T. Ramsbey
Mark T. Ramsbey

7/7/03
Date

FAX RECEIVED

JUL 10 2003

TECHNOLOGY CENTER 2800

EXHIBIT A
(4 pages)

Process

Process
#1

32

PRIORITY

A B
C D

AMD INVENTION DISCLOSURE

TLD ID#

F 0279

Rec'd date

Sunnyvale x42110, return to MS68,

Texas x55964 return

45562

Project: ☐, Product: ☐, Process: ☐, Technology ☒, to which the invention applies (identify):

ALL

List 2 to 5 key words useful to search by to find patents or art related to this invention:

ESD, IMPLANT

Working title of invention: ESD IMPLANT AFTER LDD SPACER

INVENTOR/SESSION PARTICIPANT ADDRESS INFORMATION IS ON THE NEXT PAGE (1A)

Inventor's signature: Mark Ramsey date: _____Inventor's printed full name: MARK RAMSEY Citizenship: _____

Employee #: _____ Extension: _____ Mail stop: _____ Home telephone: () _____

Division: _____ Directorate: _____ Dept #: _____ Dept: _____ Manager: _____

Residence address: _____

Post Office address: _____

MICHAEL FLIELER, MARK RANDOLPH, MIMI QIAN, YU SUN

Co-Inventor's signature: _____ date: _____

Co-Inventor's printed full name: _____ Citizenship: _____

Employee #: _____ Extension: _____ Mail stop: _____ Home telephone: () _____

Division: _____ Directorate: _____ Dept #: _____ Dept: _____ Manager: _____

Residence address: _____

Post Office address: _____

Co-Inventor's signature: _____ date: _____

Co-Inventor's printed full name: _____ Citizenship: _____

Employee #: _____ Extension: _____ Mail stop: _____ Home telephone: () _____

Division: _____ Directorate: _____ Dept #: _____ Dept: _____ Manager: _____

Residence address: _____

Post Office address: _____

Co-Inventor's signature: _____ date: _____

Co-Inventor's printed full name: _____ Citizenship: _____

Employee #: _____ Extension: _____ Mail stop: _____ Home telephone: () _____

Division: _____ Directorate: _____ Dept #: _____ Dept: _____ Manager: _____

Residence address: _____

Post Office address: _____

List on additional sheet if there are more co-inventors and list total number of inventors here: _____

Name(s) of attorney(s) preferred by inventor(s) to prepare patent application, if known:

LAW FIRM: AMIN, ESCHWEILER & TUROCY, L.L.P.

ATTORNEYS: Himanshu Amin, Tom Eschweiler, Greg Turocy, and Don Bortnick

Witness 1 initial: Greg Turocy Witness 2 initial: _____

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Page 1

AMD INVENTION DISCLOSURE

TLD ID# _____

Rec'd date _____

California x42110, return to MS68.

Texas x55964 return to MS562.

Dresden x83401 Silke Kretzschmar at MS E21-PP.

Identify known relevant art (patents, publications, products): _____

State the problem solved by this invention: AVOID SHORT CHANNEL EFFECT BY
DOING ESD IMPLANT AFTER LDD SPACER. AVOID EXTRA
MASKING STEP FOR CHEAPER PROCESS

Brief description and/or sketch of invention (please attach copies of AMD patent notebook pages, reports or drawings): SEE ATTACHED

ANY PRODUCT, NOT NEC MEM

Patent notebook # _____ Page numbers _____ Number of drawings _____

Witness 1 initial: _____

Witness 2 initial: _____

AMD Invention Disclosure DB 7

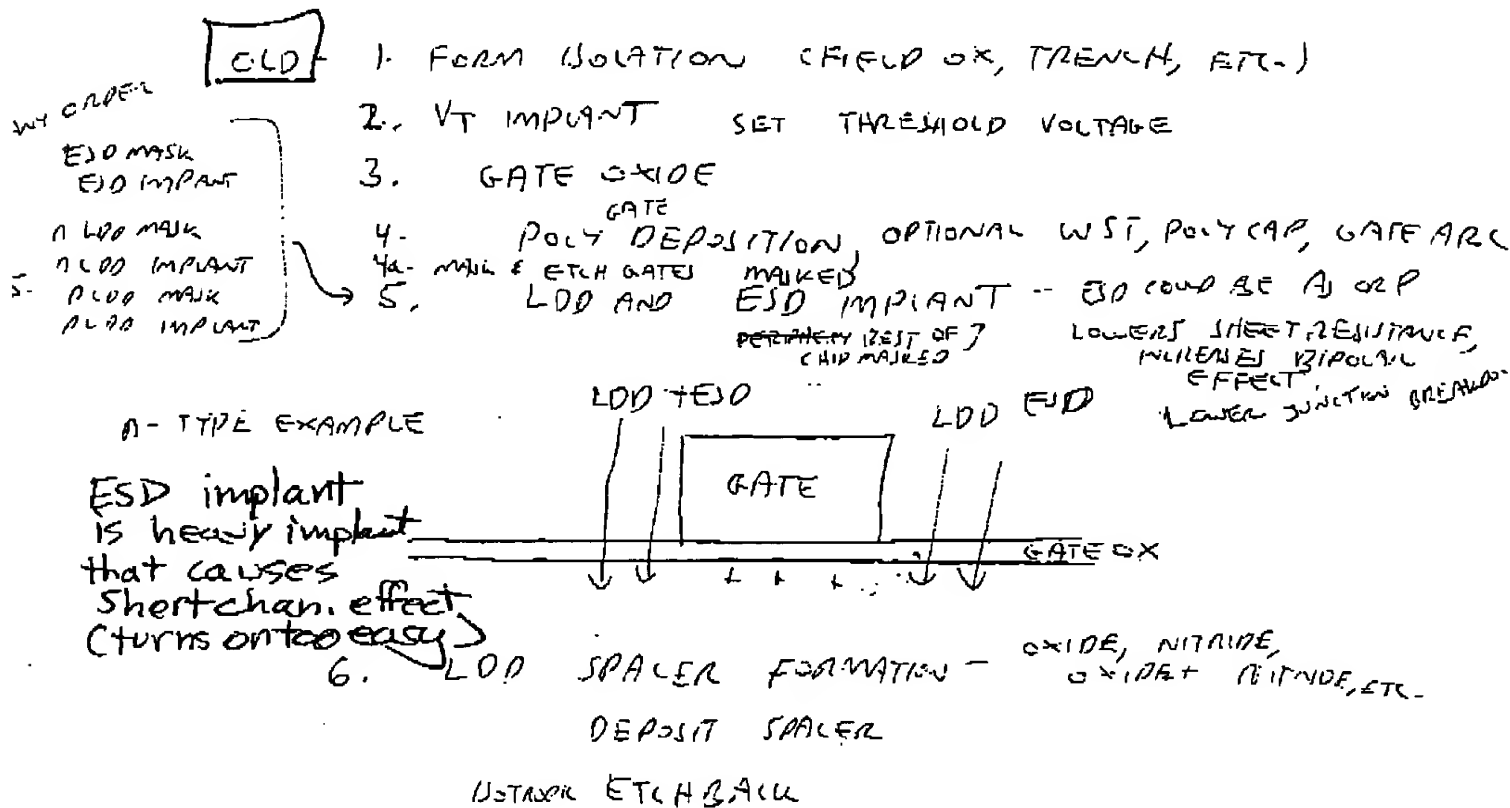
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ESD IMPLANT \nearrow IN PERIPH.

TRADITIONALLY THERE IS AN ADDITIONAL IMPLANT INTO THE ELECTROSTATIC DISCHARGE PROTECTION DEVICES. THERE IS A MASK WHICH PROTECTS THE OTHER PERIPHERY DEVICES FROM SHORT CHANNEL EFFECT.

ESD implant lowers junction breakdown



2/2

ESD IMPLANT

SOLUTION -

DO NOT DO ESD IMPLANT UNTIL AFTER SPACER ETCH

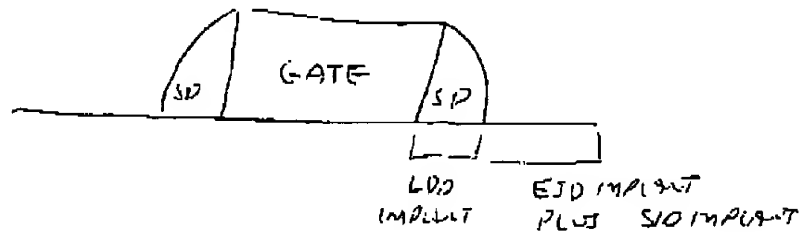
CORE & SOME PERIPH DEVICES

A. MASK ESD IMPLANT AS BEFORE SO IT ONLY GOES INTO ESD DEVICES

ADVANTAGE - ① CAN USE HEAVIER DOSE WITHOUT AS MUCH SHORT CHANNEL EFFECT ON ESD DEVICES.

② ^{shorter} ~~narrower~~ gate permitted

FLOW SAME AS BEFORE EXCEPT ESD MASK AND IMPLANT NOT IN STEP 5 BUT IN STEP 7



B. NO MASK FOR ESD IMPLANT

ALL DEVICES GET ESD IMPLANT BUT SINCE IT IS DONE AFTER SPACER IT WILL NOT CAUSE SHORT CHANNEL EFFECT AND WILL NOT

→ AFFECT P-CHANNEL DEVICES (PT SOURCE/DRAIN IMPLANT WILL COUNTER DOPE IT)

Adv - eliminate mask step